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REGION 10
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Reply To
Attn. Of: OW-130

FINDING OF NO SIGNIFICANT IMPACT (FONSI)

To all interested government agencies,
public groups, and individuals:

In accordance with the Environmental Protection Agency (EPA) procedures for complying with the National Environmental Policy Act (NEPA), 40 CFR Part 6, Subpart F, EPA has completed an environmental review of the following proposed action:

**Modification of Total Dissolved Solids (TDS) Effluent Limits in
National Pollutant Discharge Elimination System (NPDES) Permit AK-003865-3**

to:

Teck Cominco Alaska, Inc. (Red Dog Mine)

EPA Role and Responsibility:

Because the surface water discharge is subject to the New Source Performance Standards in 40 C.F.R. Part 440, the permit is subject to National Environmental Policy Act (NEPA) review as required under EPA's implementing NEPA regulations at 40 C.F.R. Part 6.

Background Synopsis:

In 1984, EPA and the U.S. Department of Interior (DOI) issued an Environmental Impact Statement for the Red Dog Mine Project. The EIS was prepared in response to several applications by Teck Cominco Alaska, Inc. (hereafter referred to as Teck Cominco) for federal authorizations required for the project. Two NPDES permits were issued for the project: one for the discharge of wastewater from the mine site, and one for the discharge of wastewater at the port site.

The original NPDES permit issued to the mine expired in 1990. In its application for permit renewal, Teck Cominco requested to increase the volume of effluent discharged. The requested change was outside the range of alternatives considered in the original EIS. As a result, EPA prepared an Environmental Assessment (EA) that evaluated potential impacts of the modifications and selected alternatives. EPA subsequently made a Finding of No Significant Impact (FONSI) and reissued the permit in August 1998.

The 1998 NPDES permit included metals limits which were significantly more stringent than the original permit. The permit also included a limit for TDS based on the Alaska Department of Environmental Conservation's (ADEC) narrative water quality criterion for aquatic life use. This criterion did not allow the in-stream TDS concentration to increase more than one third above the natural background TDS level. Therefore, the effluent limitation was set at 176 mg/L (monthly average).

In 1999 ADEC revised its criteria for TDS. The revised criteria can allow in-stream TDS concentrations of 1,000 mg/L. Additionally, in 2002 the State proposed establishing a TDS site-specific criterion (1,500 mg/L) for Middle Fork Red Dog Creek.

Purpose and Need of Action:

The purpose of the proposed action is to modify the Red Dog Mine NPDES permit in response to an application from Teck Cominco. The proposed permit modification reflects changes in the State's water quality standards for total dissolved solids and changes in the State's 401 certification for the NPDES permit which includes authorization for a mixing zone in Mainstem Red Dog Creek and a mixing zone in Ikalukrok Creek. The proposed permit establishes effluent limits that will result in the in-stream criteria being met, and also establishes monitoring requirements.

The proposed permit modification is outside the range of alternatives considered in the original EIS. Therefore EPA has determined that an EA is appropriate (attached). The scope of the analyses in the attached EA pertains directly to the proposed changes in the NPDES permit and the reasonable alternative. The affected environment described in the EA is limited to water resources, aquatic life, and human health. Other environmental resources, such as soils, vegetation, wildlife, air quality, land use, and socioeconomics would not be affected in any way by the proposed action. Descriptions of these resources can be found in the original EIS and the previous environmental assessment for the Red Dog Mine Project.

Preferred Agency Alternative and Environmentally Preferred Alternative:

EPA's Preferred Alternative involves the approval of Teck Cominco's request for modification of TDS limits in the NPDES permit. The proposed permit includes the following requirements:

1. No discharge is allowed until after Arctic grayling have completed spawning.
2. In Mainstem Red Dog Creek, after the end of Arctic grayling spawning, the Red Dog Mine must regulate effluent flow so that the TDS level in the stream, at the edge of the mixing zone, does not exceed 1,500 mg/L at any time. This limit is based on the proposed site-specific criteria for Mainstem Red Dog Creek. The mixing zone starts at the confluence of North Fork Red Dog Creek and continues downstream 1,930 feet.
3. In Ikalukrok Creek from the confluence with Mainstem Red Dog downstream to the

confluence with the Wulik River, Red Dog Mine must regulate effluent flow so that the TDS level in the stream, at the edge of the mixing zone, does not exceed 1,000 mg/L. The mixing zone starts at the confluence of the Mainstem Red Dog Creek and continues downstream 3,420 feet.

4. When spawning occurs in Ikalukrok Creek (July 25 through the end of the discharge season), Red Dog Mine must regulate flow so that the TDS level in the stream, where spawning occurs, does not exceed 500 mg/L.

Other Action Alternative Considered:

Maintain TDS Limits in Current NPDES Permit. Under this alternative, EPA would not change the TDS limits that are in the existing NPDES permit. Instead, EPA would retain effluent limits for TDS of 170 mg/L (monthly average) and 196 mg/L (daily maximum). In order to meet these limits, Cominco would have to install additional water treatment to reduce TDS levels approximately 95 percent from the nominal concentrations in treated effluent which ranged from 1,710 mg/L to 3,640 mg/L in 2002.

Mitigation Measures:

To lessen the potential for adverse environmental impact to environmental resources the following mitigation measures shall become binding permit conditions upon Teck Cominco. If Teck Cominco fails to comply with the permit conditions (i.e. implement mitigation measures), the responsible official within EPA may consider applying any of the enforcement procedures specified in the Clean Water Act Sections 308 and 309.

Mitigation Measures. Mitigation measures to minimize adverse environmental impacts associated with the proposed project include:

- Discharge from the mine shall not be allowed until after Arctic Grayling spawn, usually in late May to early June;
- TDS concentrations shall not exceed 500 mg/L in Ikalukrok Creek during the salmon and Dolly Varden spawning period, between July 25 through the end of the discharge season.

Summary:

Based on the EA and consideration of the proposed NPDES permit conditions, and in accordance with the guidelines for determining the significance of proposed federal actions (40 C.F.R. 1508.27) and EPA criteria for initiating an Environmental Impact Statement (EIS) (40 C.F.R. 6.605), EPA has concluded that the proposed NPDES permit will not result in a significant effect on the human environment.

In accordance with NEPA regulations at 40 C.F.R. Part 1508.13, the findings of the EA are hereby incorporated by reference. The proposed permit will not significantly affect land use patterns or

population, wetlands or flood plains, threatened or endangered species, farmlands, ecologically critical areas, historic resources, air quality, water quality, noise levels, fish and wildlife resources, nor will it conflict with approved local, regional, or state land use plans or policies. The proposal also conforms with all applicable federal statutes and executive orders. As a result of these findings, EPA has determined that a supplemental EIS will not be prepared.

Comments supporting or disagreeing with this FONSI may be submitted, within 30 days of the release of this FONSI, to:

Hanh Gold
U.S. Environmental Protection Agency
1200 Sixth Avenue, OW-130
Seattle, WA 98101
Fax: (206) 553-0165
Email: gold.hanh@epa.gov

Additional copies of the EA can be obtained by calling Hanh Gold at (206) 553-0171 or are available for public review on EPA's website at www.epa.gov/r10earth/water/npdes.htm and at the Kivalina Tribal Center.

No administrative action will be taken for at least 30 days after the release of this FONSI. EPA will fully consider all comments before taking final action.

Randall F. Smith
Director, Office of Water, Region 10
U.S. Environmental Protection Agency

CONCURRENCE PAGE

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bcc: Hahn Gold, OW
Kathleen Collins, OW
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CONCURRENCES						
<u>Initials:</u>						
<u>Name:</u>	Gold	Collins	Donahue	Robichaud	Larsen	Smith

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